

DOCUMENT-IDENTIFIER: US 20020135099 A1

TITLE: Mold with metal oxide surface compatible
with ionic
release agents

----- KWIC -----

Pre-Grant Publication (PGPub) Document Number -
PGNR (1):

20020135099

Detail Description Paragraph - DETX (18):

[0051] As previously described, positively charged metal oxide surfaces are generated when exposed to acidic (low pH) solutions. The positively charged surface is important to the spontaneous formation of anionic mold release films. In contrast, metal oxide surfaces exhibit a negative charge when exposed to basic solutions. For each metal oxide, there is a pH value for which there is an equal tendency to form negatively charged structures and positively charged structures (resulting in a net zero surface charge). This "zero charge" pH value is characteristic of metal oxides and is called the isoelectric point (IEP). At pH values less than the IEP, the metal oxide surface exhibits a net positive charge. A negative surface charge results when the metal oxide is exposed to an aqueous solution of a pH value greater than the IEP. An anionic release film will form spontaneously when deposited onto a metal oxide with an IEP greater than the pH of the solution containing the anionic mold release material.

Detail Description Paragraph - DETX (20):

[0053] In contrast, the tin side of float glass is enriched with SnO_{sub.2}. X-ray Photoelectric Spectroscopy (XPS) studies have shown as much as 39% SnO_{sub.2} at the surface of the tin-side of float glass. See Baitinger,